

EXPERT REPORT OF KATHERINE KEYES, PhD

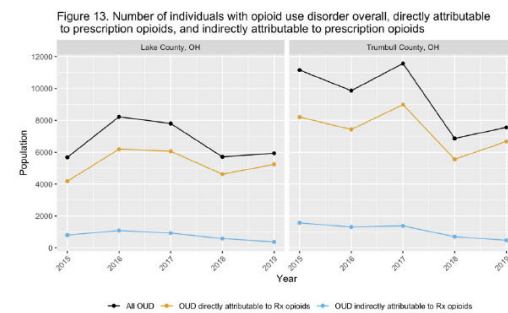
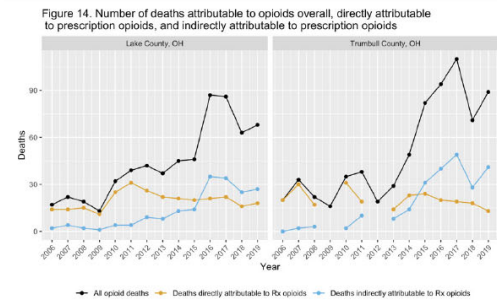
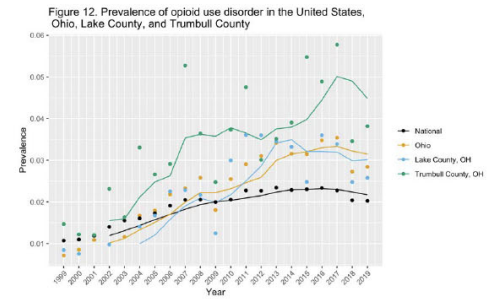
April 16, 2021





Table 2. Estimated number of individuals with OUD in the US, Ohio, Lake County and Trumbull County

	US		Ohio		Lake County		Trumbull County	
	N	Moving average	N	Moving average	N	Moving average	N	Moving average
1999	2,990,919		81,294		1,923		3,322	
2000	3,095,085		96,669		1,717		2,747	
2001	3,386,189		123,988		N/A		2,699	
2002	4,032,624	3,376,204	159,856	115,452	2,232	1,957	5,151	3,480
2003	4,502,448	3,754,087	132,898	128,353	N/A	N/A	3,606	3,551
2004	4,703,468	4,156,182	191,633	152,094	3,205	2,719	7,254	4,678
2005	5,111,092	4,587,408	205,570	172,489	3,813	3,083	5,802	5,453
2006	5,700,763	5,004,443	250,497	195,150	5,139	4,052	6,300	5,741
2007	6,177,370	5,423,173	268,219	228,980	5,229	4,347	11,302	7,665
2008	6,249,141	5,809,592	297,218	255,376	4,979	4,790	7,727	7,783
2009	6,236,336	6,090,903	208,502	256,109	2,868	4,554	5,229	7,640
2010	6,347,812	6,252,665	294,071	267,003	6,891	4,992	7,853	8,028
2011	7,093,750	6,481,760	335,544	283,834	8,289	5,757	9,947	7,689
2012	7,122,596	6,700,124	358,468	299,146	8,266	6,579	6,242	7,318
2013	7,412,955	6,994,278	395,749	345,958	7,928	7,844	7,254	7,824
2014	7,292,649	7,230,488	366,052	363,953	7,612	8,024	8,013	7,864
2015	7,406,957	7,308,789	365,606	371,469	5,682	7,372	11,159	8,167
2016	7,552,707	7,416,317	404,033	382,860	8,230	7,363	9,868	9,074
2017	7,415,786	7,417,025	412,734	387,106	7,803	7,332	11,572	10,153
2018	6,673,870	7,262,330	318,830	375,301	5,709	6,856	6,868	9,867
2019	6,654,789	7,074,288	332,317	366,979	5,934	6,919	7,560	8,967



			use	to parental opioid use
Any mood disorder	14.3%	28.6 to 42.9%	1,018 to 1,527	1,254 to 1,881
Any anxiety disorder	31.9%	63.8 to 95.7%	2,271 to 3,407	2,798 to 4,196
ADHD	8.7%	17.4 to 26.1%	619 to 929	763 to 1,144
Any substance use disorder	11.4%	22.8 to 34.2%	811 to 1,218	1,000 to 1,500
Learning disability	9.7%	19.4 to 29.1%	691 to 1,036	851 to 1,276

Table 3. Approximate number of children in Lake County and Trumbull County in need of psychiatric and other services to manage symptoms				
	Prevalence in the general population ²⁴⁸	Estimated prevalence among children exposed to parental drug use (2x to 3x higher risk)	Number of children in Lake County potentially needing psychiatric or other services to manage symptoms due to parental opioid	Number of children in Trumbull County potentially needing psychiatric or other services to manage symptoms due

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